

SMAF Plastic-Encapsulate Diodes

Schottky Rectifier Diodes

Features:

- $I_{F(AV)}$ 3A
- V_{RRM} 20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

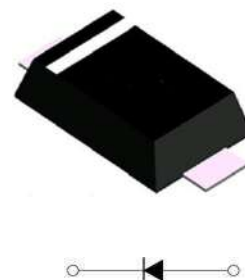
Applications

- Rectifier

Marking

- SS3X
 X : From 2F To 20F

SMAF



Limiting Values(Absolute Maximum Rating)

| Item | Symbol | Unit | Test Conditions | SS3 | | | | | | | | |
|--------------------------------------|-------------|-------------|---|------------|----|----|----|----------|----|-----|-----|-----|
| | | | | 2F | 3F | 4F | 5F | 6F | 8F | 10F | 15F | 20F |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 |
| Maximum RMS Voltage | V_{RMS} | V | | 14 | 21 | 28 | 35 | 42 | 56 | 70 | 105 | 140 |
| Average Forward Current | $I_{F(AV)}$ | A | 60Hz Half-sine wave · Resistance load · TL(Fig.1) | 3.0 | | | | | | | | |
| Surge(Non-repetitive)Forward Current | I_{FSM} | A | 60Hz Half-sine wave · 1 cycle · $T_a=25^{\circ}C$ | 120 | | | | | | | | |
| Junction Temperature | T_J | $^{\circ}C$ | | -55~+125 | | | | -55~+150 | | | | |
| Storage Temperature | T_{STG} | $^{\circ}C$ | | -55 ~ +150 | | | | | | | | |

Electrical Characteristics ($T = 25^{\circ}C$ Unless otherwise specified)

| Item | Symbol | Unit | Test Condition | SS3 | | | | | | | | | |
|-----------------------------|------------------|---------------|-------------------------------|-------------------|----|------|----|------|----|------|-----|-----|--|
| | | | | 2F | 3F | 4F | 5F | 6F | 8F | 10F | 15F | 20F | |
| Peak Forward Voltage | V_F | V | $I_F=3.0A$ | 0.55 | | 0.70 | | 0.85 | | 0.95 | | | |
| Peak Reverse Current | I_{RRM1} | mA | $V_{RM}=V_{RRM}$ | $T_a=25^{\circ}C$ | | | | 0.5 | | 0.1 | | | |
| | I_{RRM2} | | | 10 | | 5.0 | | | | | | | |
| Thermal Resistance(Typical) | $R_{\theta J-A}$ | $^{\circ}C/W$ | Between junction and ambient | 55 | | | | | | | | | |
| | $R_{\theta J-L}$ | | Between junction and terminal | 17 | | | | | | | | | |

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

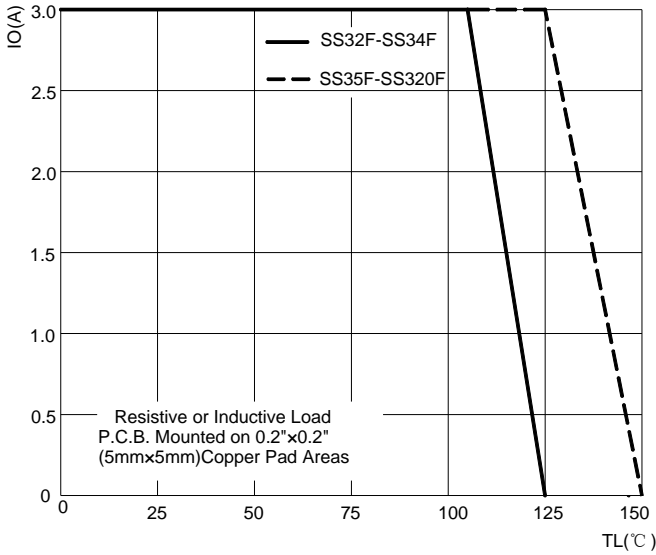


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

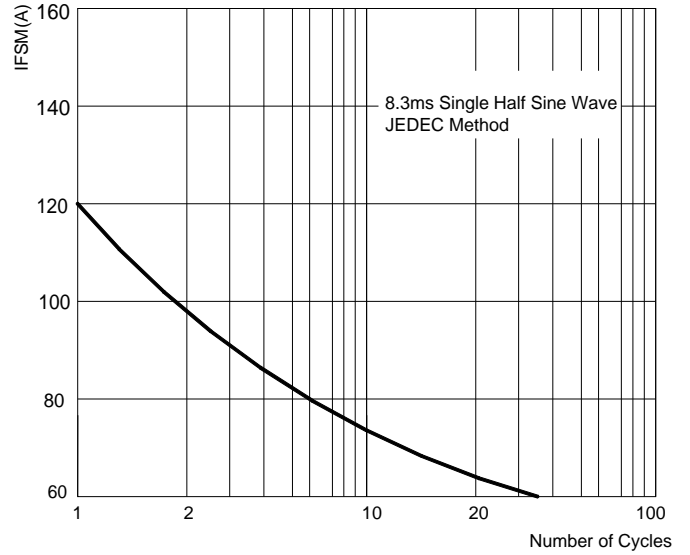


FIG.3: TYPICAL FORWARD CHARACTERISTICS

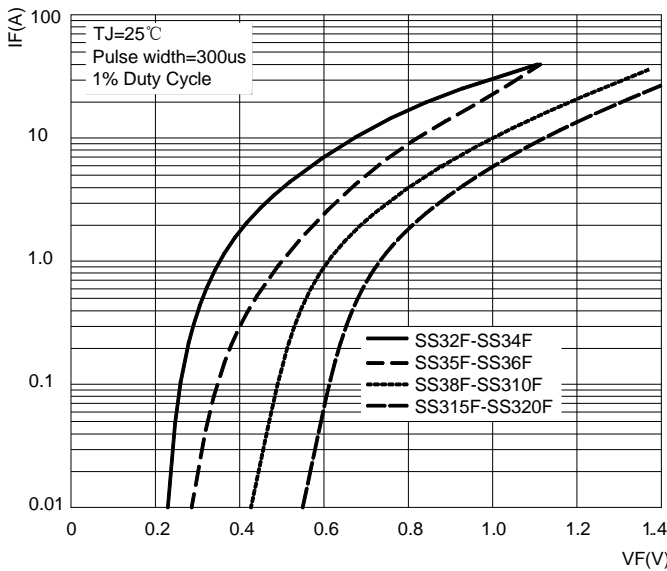
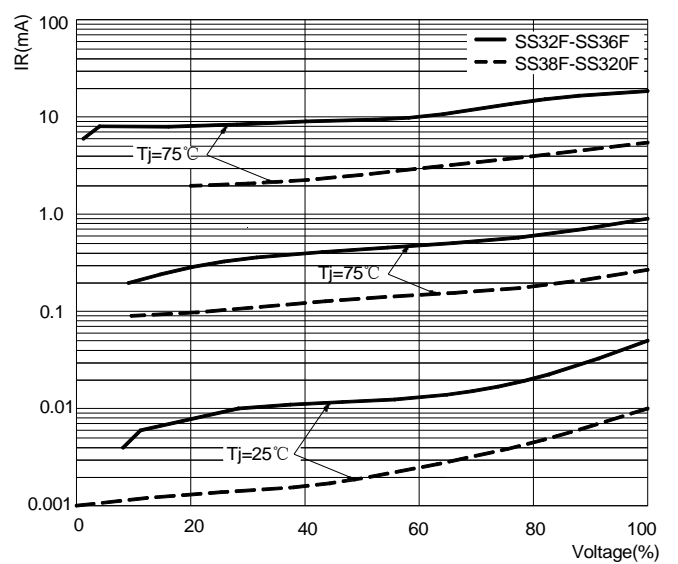
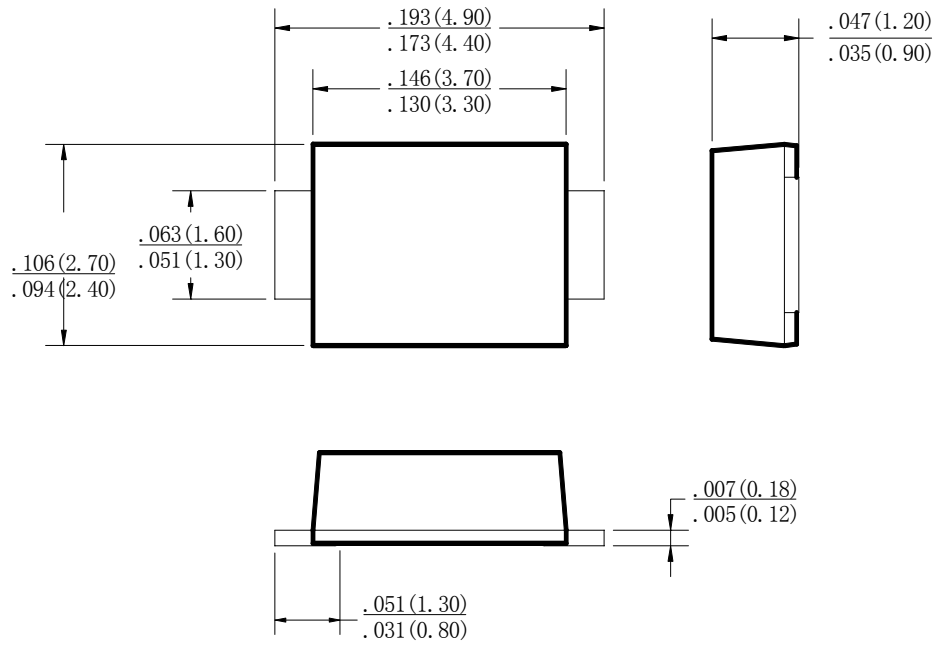


FIG.4: TYPICAL REVERSE CHARACTERISTICS

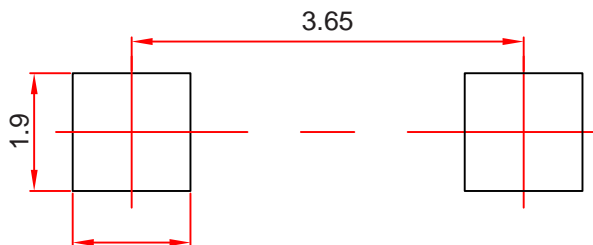


SMAF Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAF Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

Reel Taping Specifications For Surface Mount Devices- SMAF

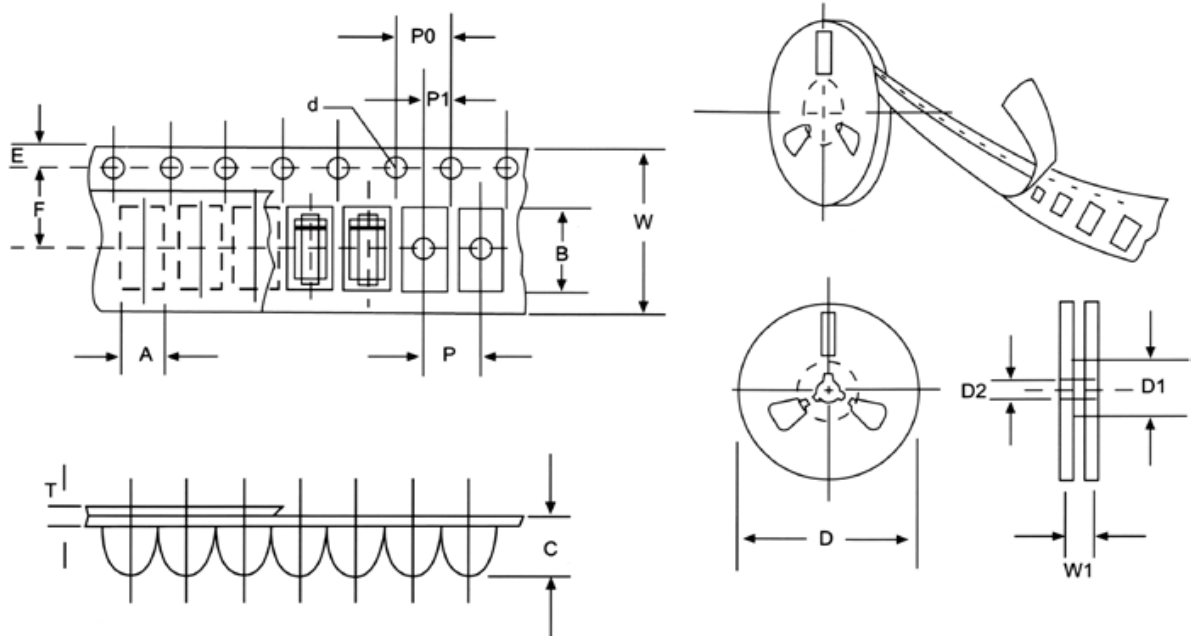


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

| ITEM | SYMBOL | SMAF mm(inch) |
|------------------------|--------|------------------------|
| Carrier width | A | 2.83+0.1(0.112+0.004) |
| Carrier length | B | 4.90+0.1(0.193+0.004) |
| Carrier depth | C | 1.45+0.1(0.057+0.004) |
| Sprocket hole | d | 1.55+0.05(0.061+0.002) |
| Reel outside diameter | D | 178+2.0(7.0+0.079) |
| Reel inner diameter | D1 | 54±1.0(2.13±0.039) |
| Feed hole diameter | D2 | 13+0.5(0.512+0.020) |
| Sprocket hole position | E | 1.75+0.1(0.069+0.004) |
| Punch hole position | F | 5.5+0.05(0.217+0.002) |
| Punch hole pitch | P | 4.0+0.1(0.157+0.004) |
| Sprocket hole pitch | P0 | 4.0+0.1(0.157+0.004) |
| Embossment center | P1 | 2.0+0.1(0.079+0.004) |
| Total tape thickness | T | 0.23-0.29(0.009-0.011) |
| Tape width | W | 12.0+0.1(0.472+0.004) |
| Reel width | W1 | 16.8+2.0(0.661+0.079) |

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.